

**California Code of Regulations, Title 19, Chapters 2,7 and 8**

# **Flame Retardant Regulations**



**TITLE 19 CALIFORNIA CODE OF REGULATIONS  
SUBCHAPTER 1**

**Administration**

**Article 3. General Provisions**

**3.08 Decorative Materials.**

In every Group A,E,I,R-1 and D Occupancies all drapes, hangings, curtains, drops, and all other decorative material, including Christmas trees, that would tend to increase the fire and panic hazard shall be made from a nonflammabel material, or shall be treated and maintained in a flame-retardant condition by means of a flame-retardant solution or process approved by the State Fire Marshal, as set forth in Subchapter 8, Chapter 1, Title 19, CCR. Exits, exit lights, fire alarm sending stations, wet standpipe hose cabinets, and fire extinguisher locations shall not be concealed, in whole or in part, by any decorative material.

**Exceptions:**

- (a) Cubical curtains and individual patient room window curtains and drapes in Group I and D Occupancies.
- (b) Window curtains and drapes within dwelling units of Group R, Division 1 Occupancies.
- (c) Christmas trees within dwelling units of Group R, Division 1 Occupancies.

Authority: Health and Safety Code Sections 13108, 13143, 13143.6, 13211, 18897.3

Reference: Health and Safety Code Sections 13100-13146.5, 13210-13216. 18897-18897.7

**CALIFORNIA STATE FIRE MARSHAL**  
**TITLE 19 CALIFORNIA CODE OF REGULATIONS**

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**TITLE 19, CALIFORNIA CODE OF REGULATIONS  
CHAPTER 2**

**Tents, Awnings and Other Fabric Enclosures**

**Article 1. General Provisions**

**303. Scope.**

(a) The provisions of this subchapter apply to the sale, offering for sale, manufacturing for sale, rental and use of tents within this state.

(b) For building standards relating to tents and membrane structures see Chapter 2-55, Part 2, Title 24, California Code of Regulations (California Building Code).

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116

**Article 2. Definitions**

**310. Definitions.**

(a) **Tent.** A shelter, structure or enclosure made of fabric or similar pliable material.

(b) **Large Tent.** A tent designed for use by 10 or more people.

(c) **Small Tent.** A tent designed for use by less than 10 people.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116

**Article 3. Tents Having an Occupant Load of Ten or More**

**312. Parking of Vehicles.** Vehicles necessary to the operation of the establishment, shall be parked at least 20 feet from any tent. No other vehicle shall be parked less than 100 feet from any tent except vehicles parked on a public street shall park at least 20 feet from any tent.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116

**315. Flame Resistance Standards.**

(a) All tent fabrics and all interior decorative fabrics or materials shall be flame resistant in accordance with appropriate standards set forth in Subchapter 8 of these regulations.

Tent tops and sidewalls shall be made either from fabric which has been flame resistant treated with an approved exterior chemical process by an approved application concern, or from inherently flame resistant fabric approved and listed by the State Fire Marshal.

(b) Sawdust, shavings, or other combustible material used on the floor or ground shall be made flame resistant or, when approved by the enforcing authority, shall be kept adequately damp when the tent is occupied.

(c) Repealed.

(d) Certificates of Flame Resistance or other documentation affirming the requirements of subsection (a) of this section shall be made available upon request of the enforcing authority.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**316. Smoking Prohibited.** Smoking is not permitted in any tent, and in any adjacent areas where hay or other highly flammable materials are kept. "No SMOKING" signs shall be conspicuously posted in all tents open to the public and wherever otherwise specified by the enforcing authority.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**317. Fireworks and Open Flames.** Fireworks, open flame or any device emitting flame or spark shall not be used in or immediately adjacent to any tent while open to the public, except when approved in writing by the enforcing authority.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**319. Fire Extinguishers and Other Fire Protection Equipment.**

(a) One Class 2A fire extinguisher shall be provided in every tent having a floor area between 500 square feet and 1000 square feet plus one 2A fire extinguisher in each auxiliary adjacent tent. One additional extinguisher shall be provided for each additional 2000 square feet or fraction thereof.

(b) At least one Class 10BC fire extinguisher shall be provided with each generator or transformer.

(c) At least one Class 10BC fire extinguisher shall be provided in kitchen, dining areas, and at locations where flammable or combustible liquids or flammable gases are used, stored or dispensed.

(d) Tents having a capacity of 1000 or more persons shall be protected on each of the long sides with fire hose lines of at least 1 ½-inch internal diameter and of sufficient length to reach either end of the tent. The water supply shall be either from the public water mains or from tanks having a capacity of not less than 500 gallons. There shall be at least 65 pounds of flowing pressure at the nozzle of the hose line when a ½-inch tip is used.

(e) The enforcing authority may modify or waive any of the requirement of this section and may accept other types of fire extinguishing equipment in lieu of that required by these regulations if, in the authority's opinion, reasonable and adequate protection will be afforded.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**320. Fire Safety Personnel.** The owners or operators of any tent used as a place of assemblage shall provide at least one qualified fire safety person in every tent having a capacity of 500 persons and one additional qualified person for each 1000 additional persons or fraction thereof. Such persons shall be on duty in the tent at all times when the tent is open to the public. They shall be proficient in the

handling of fire extinguishers and equipment and shall be familiar with the fire and panic safety regulations. The individual designated under this section shall meet the approval of the fire authority having jurisdiction.

**EXCEPTION:** The enforcing authority may waive or modify the provisions of this section if, in his opinion, public safety will not be jeopardized.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**321. Abatement of Fire or Panic Hazards.** Any condition that presents a fire hazard, would contribute to the rapid spread of fire, interfere with the rapid exit of persons from the tents, or interfere with or delay the extinguishment of a fire, shall be immediately corrected as ordered by the enforcing authority.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**324. Flammable and Combustible Liquids.**

(a) Liquids having a flash point below 200°F shall not be stored in any tent nor less than 50 feet from any tent.

(b) Flammable or combustible liquids shall be stored and dispensed in accordance with the provisions of the Uniform Fire Code.

The enforcing authority may permit limited quantities of flammable or combustible liquids required for display and normal merchandizing.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**325. Liquified Petroleum Gas.** Liquified petroleum gas shall not be stored or used in connection with any tent unless the storage containers, equipment, fittings, appliances, placement, use and operation complies with the provisions of Article 5, Subchapter 1, Chapter 4, Title 8, California Code of Regulations.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119



### **326. Hazard Abatement.**

(a) All flammable vegetation within 50 feet of any tent shall be removed.

(b) Hay, straw, trash and other similar flammable material shall be stored more than 50 feet from any tent except upon approval of the enforcing authority.

**EXCEPTION:** Tents to which the public is not admitted.

(c) Combustible waste shall not be permitted to accumulate on the grounds either inside or outside of tents. Such waste shall be stored in approved containers until removed from the premises.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

### **Article 4. Flame Resistance and Labeling, All Tents**

### **332. Flame Resistance.**

(a) All tents manufactured for sale, sold, rented, offered for sale, or used in California shall be made from nonflammable material or one of the following flame resistant fabrics or material approved by the State Fire Marshal:

(1) Fabrics complying with the State Fire Marshal's requirements for flame resistance for exterior use, as set forth in Subchapter 8, or,

(2) Fabrics complying with the flame resistance requirements set forth in "A Specification for Flame Resistant Materials Used in Camping Tentage" published in 1975 by Canvas Products Association International, hereinafter referred to as CPAI-84.

#### **Exceptions:**

(1) Tents used for committal services at cemeteries

(2) Tents or similar fabric enclosures used within a sound stage or equivalent enclosure equipped with an overhead automatic fire extinguishing system.

Authority: Health and Safety Code Section 13116  
Reference: Health and Safety Code Sections 13115-13116, 13119

**334. Requirements Pertaining to All Tents.** All tents manufactured for sale in California shall be labeled in accordance with the appropriate provisions of Section 335.

Authority: Health and Safety Code Section 13116  
Reference: Health and Safety Code Sections 13115-13116, 13119

**335. Labeling of Tents.**

(a) Each section of top and sidewall in large tents shall have a durable label permanently affixed bearing the following information:

- (1) The Seal of Registration
- (2) If treated fabric, the name and registration number of the approved application concern and approved chemical used, and the date of treatment.
- (3) If registered fabric, the trade name and registration number of the approved fabric, and the date of production.

In lieu of attached labels, the required information may be applied directly to the fabric by print, stamp or stencil.

(b) Small tents shall have a permanently affixed label bearing the information in subsection (a) or shall comply with the provisions specified in CPAI-84 which reads as follows:

- (1) **Certification.** A statement that the materials used in the manufacture of the item meet the flame resistance requirements of CPAI-84.
- (2) **Manufacturer Identification.** An identification of the manufacturer of the item. If the item bears a private label, it shall identify the private labeler and shall also contain a code mark which will permit the seller of the item to identify the manufacturer to the purchaser upon request.

**(3) Code Number.** A number enabling the manufacturer to identify from his records the suppliers and suppliers' lot numbers of the certified materials used in the item. The manufacturer shall also maintain records identifying the parties to whom he sold camping tentage. Further, he shall maintain records identifying items manufactured from lots of certified material. Records shall be maintained for 4 years.

**(4) Warning Label.**

34 pt. WARNING

16 pt. KEEP ALL FLAME AND HEAT SOURCES AWAY  
FROM THIS TENT FABRIC

12 pt. THIS TENT IS MADE WITH FLAME RESISTANT FABRIC  
WHICH MEETS CPAI-84 SPECIFICATIONS. IT IS NOT  
FIREPROOF. THE FABRIC WILL BURN IF LEFT IN  
CONTINUOUS CONTACT WITH ANY FLAME SOURCE.

THE APPLICATION OF ANY FOREIGN SYBSTANCE NOT  
THE TENT FABRIC MAY RENDER THE FLAME  
RESISTANT PROPERTIES INEFFECTIVE.

This warning label or its equivalent must be permanently affixed to the tent at one conspicuous location and must contain block letters on a white background. The first paragraph of the body of the label must be placed in a conspicuous location on each carton containing the tent.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

## **Article 5. Existing Tents**

**340. Existing Small Tents.** Existing small tents are exempt from this subchapter.

Authority: Health and Safety Code Section 13116

Reference: Health and Safety Code Sections 13115-13116, 13119

**341. Existing Membrane Structures and Other (Large) Existing Tents.** Existing membranes of membrane structures and large (10 or more capacity) existing tents may continue to be used provided evidence of satisfactory flame resistance is available to the enforcing authority. Such evidence may be in the form of certification that the fabric passes the standard small scale flame resistance test as set forth in the regulations or through passage of effective field tests.

**Authority:** Health and Safety Code Section 13116

**Reference:** Health and Safety Code Sections 13115-13116, 13119

**CALIFORNIA STATE FIRE MARSHAL**  
**TITLE 19 CALIFORNIA CODE OF REGULATIONS**

**CHAPTER 7**  
**Flammable Fabrics Standards**

**Article**

- 1. Standards of Flammability, Wearing Apparel**
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- 3. Criteria of Acceptance**

**DETAILED ANALYSIS**  
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**Article 1. Standards of Flammability, Wearing Apparel**

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**TITLE 19, CALIFORNIA CODE OF REGULATIONS  
CHAPTER 7**

**Flammable Fabrics Standards**

**Article 1. Standards of Flammability, Wearing Apparel**

**1121 TRIS.**

(a) The chemical known as TRIS (2,3-dibromopropyl) phosphate is prohibited for use with wearing apparel.

Authority: Health and Safety Code Section 19821

Reference: Health and Safety Code Section 19821

**Article 2. Hospital Fabrics**

**1160.3 Scope.** These regulations apply to fabric and fabric-like materials used as examination gowns, sleepwear, robes, sheets and pillowcases and used in all hospitals as defined herein.

**EXCEPTION:** Fabrics or fabric-like materials which are the personal property of the patients.

Authority: Health and Safety Code Section 19818

Reference: Health and Safety Code Section 19818

**1160.5 Definitions.**

(a) **Fabric and Fabric-like.** Materials formed of fibers or yarns, either natural or synthetic,, knitted, felted, bonded, woven, or non-woven; and flexible film or sheeting formed of synthetic resins, supported or unsupported.

(b) **Hospital.** An acute general hospital (general acute care hospital), acute psychiatric hospital, skilled nursing facility or intermediate care facility.

(c) **Items.** Examination gowns, robes, sleepwear, sheets or pillowcases.

Authority: Health and Safety Code Section 19818  
Reference: Health and Safety Code Section 19818

### **Article 3. Criteria of Acceptance**

#### **1160.10 General.**

(a) **Examination Gowns and Sleepwear.** Fabric or fabric-like material in examination gowns and sleepwear shall be tested in accordance with the provisions of Chapter 4, Standard Number 702 (1975) of the National Fire Protection Association and shall have an average time of burning of 8.0 seconds or more.

**Exceptions:**

(1) Smooth-surfaced fabrics (without nap or pile) weighing 4.0 ounces per square yard or more. Weight shall be determined in accordance with ASTM D1910.

(2) Items need not be preconditioned as specified in Sections 3-2 and 4-1 of Standard 702 if they are intended to be used only once and discarded, not intended to be washed or laundered, and are labeled accordingly.

(b) **Sheets and Pillowcases.** Fabric or fabric-like material in sheets and pillowcases shall have an average time of burning of 7.0 seconds or more when tested in the manner specified in this section.

**Exceptions:**

(1) Smooth-surfaced fabrics (without nap or pile) weighing 3.2 ounces per square yard or more. Weight shall be determined in accordance with ASTM D1910.

(2) Items need not be preconditioned as specified in Sections 3-2 and 4-1 of Standard 702 if they are intended to be used only once and discarded, not intended to be washed or laundered, and are labeled accordingly.



(c) **Sleepwear and Robes.** Children's sleepwear and robes shall meet the flammability standards adopted in Title 16, CFR, Chapter II, Subchapter D. Adult clothing including robes shall meet the flammability standards adopted in Title 16, CFR, Chapter 11, Subchapter D.

Authority: Health and Safety Code Section 19818

Reference: Health and Safety Code Sections 19810-19818

**1160.15 Labeling.** All packages or containers of items purchased for use in any hospital shall be labeled to indicate conformance with the applicable Criteria of Acceptance set forth in Article 2.

Authority: Health and Safety Code Section 19818

Reference: Health and Safety Code Section 19818

**1160.16 Certification.** Manufacturers of items may be required to furnish substantiation of conformance in a form satisfactory to the inspection authority, such as a formal certification, or may be required to furnish a copy of the test report from a qualified testing laboratory.

Authority: Health and Safety Code Section 19818

Reference: Health and Safety Code Section 19818

**CALIFORNIA STATE FIRE MARSHAL**

**TITLE 19 CALIFORNIA CODE OF REGULATIONS**

**CHAPTER 8**

**Regulations Relating to Flame-Retardant Chemicals, Fabrics  
and  
Application Concerns**

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- 2. Definitions**
- 3. Registration and Labeling of Chemicals**
- 4. Registration of Flame-Retardant Fabric or Material**
- 5. Registration of Flame-Retardant Application Concerns**
- 6. Flame-Retardant Application Standards**
- 7. Field Testing for Fire Resistance**
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- 9. Seal of Registration**
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**TITLE 19, CALIFORNIA CODE OF REGULATIONS  
CHAPTER 8.**

**Regulations Relating to Flame-Retardant Chemicals,  
Fabrics and Application Concerns**

**Article 1. Title, Purpose and Scope**

**1171. Title.** These rules and regulations shall be known as the "Rules and Regulations of the State Fire Marshal," may be cited as such, and will be referred to herein as "these rules and regulations".

Authority: Health and Safety Code Section 13120 and 13126  
Reference: Health and Safety Code Section 13120 and 13126

**1172. Purpose.** These rules and regulations have been prepared and adopted for the purpose of establishing minimum standards for the prevention of fire and for the protection of life and property against fire and panic through the use of flame-retardant chemicals, fabrics and materials.

Authority: Health and Safety Code Section 13120  
Reference: health and Safety Code Section 13120

**1173. Scope.** These rules and regulations shall govern the manufacture, sale and application of flame-retardant chemicals used in connection with fabrics or materials required to be treated and maintained in a flame-retardant condition as provided in Sections 13115 or 13116 of the Health and Safety Code. These rules and regulations shall also apply to fabrics or materials inherently nonflammable and, they shall also establish minimum fire-resistive standards for such fabrics or materials.

These rules and regulations shall also establish minimum standards and specific procedures for the approval of flame-retardant chemicals, flame-retardant materials and flame-retardant applicator concerns.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Sections 13100 through 13132



**1174. Basic.** These rules and regulations are based upon the presumption of fact that fabrics and similar materials commonly known to be flammable increase, or may cause the increase of, the hazard or menace of fire, that proper and adequate flame-retardant treatment through the use of certain chemicals is possible whereby the danger to life and property from fire and panic can be materially reduced; and, that there do exist certain fabrics and materials which by nature are nonflammable.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1175. Local Ordinances.** Nothing contained in these rules and regulations shall be considered as abrogating the provisions of any ordinance, rules or regulations of any city, city and county, county or political subdivision nor will they prohibit the enactment of more stringent regulations by these political subdivisions.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1176. Basic Characteristics and Test Standards.** The quality of resistance to ignition and combustion shall be the primary feature of the test standards, but such other factors as the effect of the chemicals on materials being treated and the probable life of the flame-retardant quality shall also be given due consideration.

Test standards shall be those adopted and developed through research by the State Fire Marshal and shall include, but not by way of limitation, means for determining weight gain, effects of weathering, breaking strength, aging, flexibility, crocking, neutrality (pH), appearance, settling and any other test found necessary to insure requisite qualities.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1177. Notices.** Any notice required to be given to any person by any provisions of the statute or of these rules and regulations may be given by mailing such notice, postage prepaid, addressed to the person notified, at his last place of residence or business as it appears in the records of the State Fire Marshal.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1177.1. Change in Location.** Any change in the location or ownership of any flame-retardant application concern, any manufacturer of any flame-retardant chemical, fabric or material, or any person or concern whose name or whose product is approved for listing on the State Fire Marshal's approved list of flame-retardant chemicals, fabrics, materials and application concerns shall be reported in writing to the State Fire Marshal within 7 days after the change by the person who is the owner after the change.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1178. Constitutionality.** If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations or application of such provision to other persons or circumstances, shall not be affected thereby.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1179. Fees.**

|  |           |
|--|-----------|
| (a) Original or Annual Renewal Registration of any Single Flame-Retardant Fabric or Material           | \$ 200.00 |
| (b) Original or Annual Renewal Registration of a Flame Retardant Chemical . . . . .                    | \$ 200.00 |
| (c) Original or Annual Renewal of a Flame-Retardant Application Concern (General Applicator) . . . . . | \$ 175.00 |
| (d) Original or Annual Renewal of a Flame-Retardant Application Concern (Limited Applicator) . . . . . | \$ 85.00  |
| (e) Laboratory Fees:   |           |
| Fabrics . . . . .  | \$ 50.00  |
| Chemicals . . . . .  | \$ 50.00  |
| General Applicator . . . . .   | \$ 9.00   |

Authority: Health and Safety Code Section 13127

Reference: Health and Safety Code Sections 13125, 13127, 13128, 13129 and 13130

## **Article 2. Definitions**

**1190. Applicator.** as used herein means any person who engages in the application of flame-retardant compounds or chemicals to any fabric or material for the purpose of retarding the action of fire or flame on such fabric or material.

**1191. Approved.** means approved by the State Fire Marshal.

**1192. Approved Laboratory.** as used herein means any commercial laboratory qualified and equipped to perform the tests required by these rules and regulations and which is approved for this purpose by the State Fire Marshal.

**1193. Chemical.** as used herein means flame-retardant chemical.

**1194. Concern.** as used herein means any person, firm, association, or organization, partnership, business trust, corporation, or company.

**1195. Flame-Retardant Application Concern.** as used herein means any concern which engages in the application of flame-retardant compounds or chemicals. A flame-retardant application concern may employ a number of applicators. An individual applicator in business for himself shall be considered as a flame-retardant application concern.

**1196. Flame-Retardant Chemical.** as used herein means any chemical, chemical compound or chemical mixture which when properly applied to a fabric or material will render such fabric or material incapable of supporting combustion to the extent that it will successfully withstand the tests and meet the specifications promulgated by the State Fire Marshal.

**1197. Flame-Retardant Chemical, Exterior.** as used herein means those flame-retardant chemicals which are intended to retain their flame-retardant properties when used on fabrics or materials which are exposed to weather conditions without means of protection from the elements.

**1198. Flame-Retardant Chemical, Interior.** as used herein means those flame-retardant chemicals intended to be used on fabrics or materials which are not subject to exposure to weather and need not of necessity be weather resistant.

**1199. Health and Safety Code.** as used herein means the Health and Safety Code of the State of California.

**1200. Manufacturer.** as used herein means any concern which shall manufacture, mix or compound one or more chemical substances and offer such chemical, compound or mixture for sale or for use as a flame-retardant chemical, or any concern which shall market a flame-retardant or nonflammable fabric or material for use as drape, hangings, curtains, drops or other similar decorative materials, or flame-retardant canvas for use in tents.

**1201. Nonflammable Material.** as used herein means a fabric or material which is inherently flame-resistant to the extent that it will meet the requirements of the fire resistance test herein prescribed, but shall not include materials which must be chemically treated or processed after manufacture to make them flame-resistant.

**1202. Place of Public Assemblage.** as used herein means any occupancy mentioned in Sections 13115 or 13119 of the Health and Safety Code.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

### **Article 3. Registration and Labeling of Chemicals**

**1210. Chemical Registration.** Any chemical manufacturing concern desiring to have a chemical registered by the State Fire Marshal shall accompany its application with the laboratory test report, and the registration fee as provided in Section 13127 of the Health and Safety Code.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1211. Standard Fabrics.** Persons wishing to submit a flame-retardant chemical for registration by the State Fire Marshal shall first obtain standard fabrics in accordance with the provisions of this section. For exterior chemicals a 10-ounce double filling grey duck (Federal Specification CCC-D-761, February 1933) will be used, while for interior chemical a #250 cotton drill dyed blue Pontamine 4GLN (or its equivalent) color index #533 will be the standard.

Chemicals intended for the treatment of synthetics such as acetate, nylon, Orlon and Dacron, and various fiber mixtures, shall be tested as applied to appropriate fabrics made of such fibers or mixtures.

The concern submitting the sample for test may desize the standard exterior fabric before application of the chemical if it so desires. If this is done, however, the chemical will then be registered only for use on unsized or desized fabrics. This is based on the premise that a chemical which is effective on sized material will be at least equally effective on unsized material, but that the reverse is not necessarily true. If the concern desires to submit its chemical for test on desized material, the entire sample of standard fabric shall be desized before any portion of it is treated with chemical or cut for testing.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1212. Test Costs.** Cost of laboratory tests shall be borne by the applicant seeking registration of any flame-retardant chemical. The State Fire Marshal reserves the right to publish all or any portion of the laboratory test results.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1213. Treating Test Fabrics.** The sample of standard fabric shall then be submitted to an approved laboratory, together with sufficient chemical to treat at least five yards of the fabric, and the necessary instructions for its proper application. The chemical shall be applied as per instructions, by a member of the laboratory staff, or may be applied by the person submitting the chemical in the presence of a member of the laboratory staff or a representative of the State Fire Marshal. If the applicant so desires he may treat the test sample in his flame-retardant application plant in the presence of either the laboratory staff member or a representative of the State Fire Marshal. Exterior chemicals shall be khaki color for testing.

Authority: Health and Safety Code Section 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1214. Special Processes.** In case where chemicals cannot be applied by spray, brush, or immersion, but must be applied by a specialized plant process, they shall be registered only for such method of application. Samples of both the treated and untreated fabric or material of sufficient size for test shall be submitted to an approved laboratory.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1215. Chemical Samples.** In all cases, a one gallon sample of the chemical or compound being tested shall be sent to the State Fire Marshal. This sample shall be identical in every respect with the material submitted for test. The sample shall bear a label stating:

- (1) The trade name of the chemical or compound.
- (2) The name and address of the manufacturer.
- (3) The approximate date of manufacturer.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1216. Scope and Extent of Approval.** Approval of chemicals to treat various fibers will be based on the following:

- (a) Chemicals which meet all requirements as applied to standard exterior test fabric (Sections 1230 through 1239) will be approved for treatment of any hard-surfaced cotton fabric such as duck, drill, twill, etc.
- (b) Chemicals which meet all requirements as applied to standard interior cotton test fabric (Sections 1250 through 1263) will be approved for the treatment of any cotton fabric, plus linen, burlap, silk, wool, rayon, paper and cellophane. Such chemicals may receive extended approval to treat additional fabrics as follows:

(1) **Fiber Mixtures Containing Not Over 35% Synthetics:** Supplementary tests for Weight Increase (Section 1260) and Fire Resistance (Section 1261) only on each appropriate standard mixed fabric (cotton-rayon-acetate, cotton-rayon-nylon, cotton-rayon-dacron, etc.) for which approval is desired.

(c) Chemicals which meet all requirements as applied to standard synthetic test fabrics (Section 1263.01 through 1263.9) will be approved on the following basis:

(1) **100% Synthetic (Acetate, Nylon, Dacron, Orlon, etc.):** Tests shall be performed on each appropriate standard synthetic test fabric for which approval is desired.

(2) **Fiber Mixtures Containing Over 35% Synthetics:** Supplementary tests on standard interior cotton test fabric for accelerated aging, synthetics (Section 1263.7) only.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1216.1. Other Materials.** Chemicals intended for treating materials other than fabrics, such as compressed cellulose fiber, wooden and similar decorative materials, base and leaf fibrous materials, brush and foliage. Christmas trees, etc., shall be tested as outlined in Section 1264 and its subsections.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1217. Permanent Chemicals.** The test requirements for color change, flexibility, and weight increase for "permanent" types of interior chemicals may be waived at the discretion of the State Fire Marshal.

Manufacturers of such chemicals or compounds may have the laboratory perform, along with the required tests, such additional tests as may serve to indicate the permanent nature of the flame-retardant treatment.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1218. Test Results.** The results of the test shall be certified by the laboratory on a form prepared by the State Fire Marshal. The form shall contain the trade name of the chemical or compound, the name and address of the manufacturer and the test results.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1219. Field Results.** Since laboratory tests of textile and other materials only approximate results of actual field use, continued listing of a registered chemical or fabric or material shall depend upon the ability of the chemical or fabric or material to prove satisfactory in actual use. Repeated field failure(s), regardless of laboratory test results, shall be presumed to result from chemical(s) or faulty application thereof.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1220. Retests.** The State Fire Marshal may at his discretion require retests of the manufacturer's product to ascertain continued compliance with these rules and regulations.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1221. Secondary Registrations.** A company desiring to have an already-registered chemical listed under the company's own trade or brand name may do so as follows:

(a) The manufacturer of the registered chemical shall certify in a letter to the State Fire Marshal that he agrees to furnish the registered chemical to the said company for sale, distribution or use under the new name.

(b) The concern shall certify in a notarized letter to the State Fire Marshal that the chemical or compound sold, distributed, or used under the new name shall always be identical in all respects to the original registered chemical.

(c) The company shall pay to the State Fire Marshal the original and annual renewal registration fee as prescribed by statute.



Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1222. Interior Types.** Registered interior flame-retardant chemicals shall be listed as "Type I" or "Type II" depending on the lasting qualities of the treatment. A Type I chemical shall impart a relatively permanent treatment to fabrics, and fabrics so treated must meet the requirements of the fire resistance test after at least 3 launderings and 3 dry cleanings. A "Type II" chemical shall be normal water soluble type, which is removed by laundering and by certain dry cleaning processes in which solutions of water and soap are added to the solvent.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1223. Container Labels.** All containers of flame-retardant chemical used or intended for use in complying with Sections 13115, 13119 to 13130 inclusive, of the California Health and Safety Code, shall bear a facsimile of the California State Fire Marshal's Seal of Registration shown herein, and in addition shall bear the registration number, the percentage of solids, and the flame-retardant chemical name exactly as approved and registered. Containers for interior chemicals shall bear the words: "FOR INTERIOR USE ONLY" below the registered name.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1224. Refilling Containers.** No person shall refill any flame-retardant container bearing the State Fire Marshal's Seal of Registration except the manufacturer whose registration number is shown upon the seal. Under no circumstances shall any other chemical than that originally contained be placed in such containers without first removing or defacing the Seal of Registration.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**TEST REQUIREMENTS FOR  
EXTERIOR FLAME-RETARDANT CHEMICALS  
(When Applied to Standard Test Fabric)**

**1230. Exterior Test Specifications.** Exterior flame-retardant chemicals shall be tested in accordance with specifications on file in the Office of the State Fire Marshal. The results of each test shall not fall below the minimum requirements set forth in this article. The normal breaking strength variation of the standard test fabric shall be taken into account in evaluating the test results.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1231. Appearance.** The chemical shall be uniform, homogeneous, and free from coarse particles or lumps. It shall be capable of being broken with a paddle to a smooth, uniform consistency. The normal breaking strength variation of the standard test fabric shall be taken into account in evaluating the test results.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1233. Weight Increase.** The weight of the treated fabric shall not be more than 50% greater than that of the untreated fabric.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1234. Breaking Strength.** The breaking strength of the treated fabric shall not be less than that of the untreated fabric.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1235. Accelerated Weathering.** The percentage loss in breaking strength of the treated fabric after accelerated weathering shall not be greater than that of the untreated fabric similarly weathered. The treated fabric after weathering shall meet the requirements for fire resistance outlined in Section 1237.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1236. Water Extraction.** The treated fabric, after water extraction, shall meet the requirements for fire resistance outlined in Sections 1237 and 1237.2.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1237. Fire Resistance. (Small Scale Test)** The treated fabric, in its original state, after accelerated weathering, and after water extraction, shall be tested in accordance with the method outlined in Section 1237.1 below, and shall not continue to flame for more than 2 seconds after the burner is removed. The average length of char (for the standard test fabric) shall not exceed 3½-inches. The maximum for any fabric shall not exceed 6 inches.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1237.1. Test Method. (Small Scale Test)** The specimens shall be conditioned by suspending them in an oven having mechanical air circulation, at temperatures of 140°F to 145°F for not less than 1 hour nor more than 1½ hours. Materials which distort or melt at the above oven exposure shall be conditioned at 60°F to 80°F and 25% to 50% relative humidity for not less than 24 hours.

Six specimens, each not less than 2½ inches by 12½ inches, shall be subjected to the fire resistance test. One half of each set of specimens shall be cut with the long dimension in the direction of the warp, and the other half with the long dimension in the direction of the fill.

The specimens shall be suspended vertically in a rack which covers the upper ½ inch of the length and holds the sides firmly to prevent curling, leaving a strip 2 inches by 12 inches exposed. To protect the specimens from drafts, the apparatus shall be enclosed in a sheet metal shield 12 inches wide by 12 inches deep by 30 inches high, open at the top and provided with a vertical openable glass front. Sufficient room shall be left at the bottom of the front to allow manipulation of the gas burner used in igniting the specimens.

The specimens shall be suspended with the lower end ¾ inch above the top of a 3/8 inch ID Bunsen or Tirril gas burner, with the air supply completely shut off, and adjusted to give a luminous flame 1½ inch long. The flame shall be applied vertically at the center of the width of the lower end of the specimens for 12 seconds, then withdrawn, and the duration of flaming in the specimens after withdrawal of the burner noted. After complete extinction of all flame and glow in the specimen, the length of char shall be measured as specified in Federal

Specification CC-T-191a, Supplement October 1945.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1237.2. Fire Resistance. (Large Scale)** The treated fabric, both before and after water extraction, shall be tested in accordance with the method outlined in Section 1237.3 below, and shall not continue to flame for more than 2 seconds after the burner is removed. The vertical spread of flame and afterglow (smoldering combustion), as indicated by the length of char above the tip of the test flame, shall not exceed 10 inches.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1237.3. Test Method. (Large Scale Test)** The specimens shall be conditioned by suspending them in an oven having mechanical air circulation, at temperatures of 140°F to 145°F for not less than 1 hour nor more than 1 ½ hour. Materials which distort or melt at the above oven exposures shall be conditioned at 60°F to 80°F and 25% to 50% relative humidity for not less than 24 hours.

The apparatus for conducting the flame test shall consist of a sheet steel stack 12 inches square transversely, 7 feet high and supported 1 foot above the floor on legs. The stack shall be open at the top and bottom and shall be provided with a door having an observation window of wired glass extending the full length.

Six specimens, each not less than 5 inches by 7 feet shall be subjected to the fire resistance test. One-half of each set of specimens shall be cut with the long dimension in the direction of the warp, and the other half with the long dimension in the direction of the fill. Two or more pieces may be sewn together to provide the necessary length.

The specimen shall be suspended vertically in the stack with its full width facing the observer so that the bottom of the specimen is 4 inches above the top of a Bunsen burner having a 3/8-inch diameter tube and placed on the floor below the stack. The gas supply to the burner shall be natural gas or a mixture of natural and manufactured gases having a heat value of approximately 800-1000 BTU per cubic foot. With a gas pressure of 4½-inches (108 mm) of water, the burner shall be adjusted to product an 11 inch oxidizing flame having a indistinct inner cone. The specimen shall be lightly restrained laterally with clamps and guide wires attached to its outer edges.

The flame shall be applied vertically near the middle of the lower end of the specimen for 2 minutes and then withdrawn. Observations shall be recorded during and after the flame application to include duration of surface flaming and length of char.

The length of char shall be determined as described for small scale test specimens in Section 1237.1.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1238. Flexibility.** The flexibility of the treated and untreated fabrics shall be reported. The treated fabric, after accelerated weathering, shall not increase excessively in stiffness.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1239. Crocking.** The treated fabric shall be thoroughly dry and shall not show excessive crocking.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**TEST REQUIREMENTS FOR  
INTERIOR FLAME-RETARDANT CHEMICALS  
(When Applied to Standard Cotton Interior Test Fabric)**

**1250. Interior Test Specifications.** Interior flame-retardant chemicals shall be tested in accordance with the specifications on file with the State Fire Marshal. The results of each test shall not fall below the minimum requirements set forth in this article. The normal breaking strength variation of the Standard Test Fabric shall be taken into account in evaluating the test results.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1251. Settling.** The chemical, after standing, shall not contain any precipitated solids which cannot be remixed with paddle stirring or by gentle heating to effect a homogeneous solution.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1252. Neutrality.** The pH of the chemical solution (determined on a suitable glass-electrode type pH meter) shall be reported.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1254. Color Change.** The chemical shall not cause running, streaking, change of color, or otherwise appreciably alter the appearance, texture or sheen of a fabric or material in any manner other than that exhibited by the fabric when thoroughly saturated with plain tap water.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1255. Fading.** The treated fabric shall not fade more than the untreated fabric.

Authority: Health and Safety Code Sections 13120, 13121  
Reference: Health and Safety Code Sections 13100 through 13132

**1256. Flexibility.** The flexibility of the treated and untreated fabric shall be reported.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1257. Breaking Strength.** The breaking strength of the treated fabric shall not be less than that of the original fabric similarly treated with tap water.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1258. Accelerated Aging.** The percentage loss in breaking strength of the treated fabric after accelerated aging shall not exceed that of the untreated fabric similarly aged. The treated fabric after accelerated aging shall meet the requirements of the fire resistance test. Microscopic examination of the treated fabric after aging shall not show more than a trace of efflorescence.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1259. Dry Cleaning.** The treated fabric, after dry cleaning, shall meet the requirements of the fire resistance test.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1260. Weight Increase.** The weight of the treated fabric shall not be more than 20% greater than that of the untreated fabric.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1261. Fire Resistance.** The treated fabric shall not continue to flame for more than 1 second after the burner is removed. The average length of char (for the standard cotton test fabric) shall not exceed 3½ inches. The maximum for any fabric shall not exceed 6 inches.

Specimens shall be tested for fire resistance in accordance with the method outlined in Section 1237.1.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1262. Combined Laundering and Dry Cleaning.** To be performed on Type I chemicals only. The treated fabric, after 3 dry cleanings and 3 launderings, shall meet the requirements for fire resistance outlined in Section 1261.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263. Test Procedure.** The standard procedure for testing flame-retardant chemicals and fabrics or materials is on file with the State Fire Marshal.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132



**TEST REQUIREMENTS FOR  
INTERIOR FLAME-RETARDANT CHEMICALS  
(When Applied to Standard Synthetic Test Fabrics)**

**1263.1. Settling.** The chemical, after standing, shall not contain any precipitated solids which cannot be remixed with a paddle stirring or by gentle heating to effect a homogeneous solution.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.2. Neutrality.** The pH of the chemical solution (determined on a suitable glass-electrode type pH meter) shall be between 5.0 and 9.0.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.4. Color Change.** The chemical shall not cause running, streaking, change of color, or otherwise appreciably alter the appearance, texture, or sheen of a fabric or material in any manner other than that exhibited by the fabric when thoroughly saturated with plain tap water.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.5. Fading.** The treated fabric shall not fade more than the untreated fabric.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.6. Flexibility.** The flexibility of the treated and untreated fabric shall be reported.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.7. Accelerated Aging. (Synthetic)** The percentage loss in breaking strength of the treated fabric after accelerated aging shall not exceed that of the untreated fabric, similarly aged. The treated fabric after accelerated aging shall meet the requirements of the fire resistance test. Microscopic examination of the treated fabric after aging shall not show more than a trace of efflorescence.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.8. Weight Increase.** The percentage increase in weight of the treated fabric over that of the untreated fabric shall be reported.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1263.9. Fire Resistance.** The treated fabric shall not continue to flame for more than 1 second after the burner is removed. The average length of char (for standard test fabric) shall not exceed 6 inches.

Specimens shall be tested for fire resistance in accordance with the method outlined in Section 1237.1.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**TEST REQUIREMENTS FOR  
INTERIOR FLAME-RETARDANT CHEMICALS  
(When Applied to Materials other than Fabrics)**

**1264. General Requirements.**

- (a) Tests shall be performed by an approved laboratory, or by the laboratory of the State Fire Marshal.
- (b) Sufficient quantities of the chemical and the material for the treatment of which approval is desired shall be submitted to the laboratory, where the chemical shall be applied in accordance with the manufacturer's directions.
- (c) The laboratory shall test the treated specimens in accordance with the requirements of the applicable subsection(s) below.
- (d) The laboratory shall allow treated and untreated specimens to age at normal room conditions for 30 days, during and after which period the specimens shall be examined and the condition and appearance of the chemical or coating noted. the chemical or coating shall dry to the touch within 4 hours and dry completely within 24 hours. During and after the aging period, there shall be no appreciable change in color or appearance, and no evidence of poor adhesive qualities (such as would be indicated by any tendency toward flaking or powdering off.)
- (e) A copy of the laboratory report shall be submitted to the State Fire Marshal, covering in detail the method of application or treatment (number of coats, coverage in square feet per gallon, dilution if any, etc.), the results of tests, and the description of the condition or appearance of the treated specimens after aging (including change of color, dryness, brittleness, and any other pertinent qualities). The laboratory or manufacturer shall also submit to the State Fire Marshal at least 1 quart of the chemical, together with specimens of the material for the treatment of which approval is desired.
- (f) The State Fire Marshal may perform such additional tests as he deems advisable or necessary, and his decision insofar as approval and listing of the chemical are concerned shall be final.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1264.1. Wooden and Compressed Cellulose Fiber Decorative Material.** Chemicals of the surface treatment type which are intended for the flame-retardant treatment of wooden and compressed cellulose fiber decorative materials shall be capable of being readily applied by brush or spray to achieve the required coverage.

Approval of chemicals for the flame-retardant treatment of compressed cellulose fiber and wooden decorative materials shall be based upon tunnel test results when performed by a laboratory properly equipped and staffed to make the test.

Chemicals which achieve a maximum fire hazard of 70 for flame spread will be acceptable, where treated oak is rated at 100 and incombustible asbestos-cement board is rated at 0.

Chemicals intended for flameproofing nonsolid wooden decorative materials, such as sawdust, shavings and excelsior shall be approved if they are capable of satisfactorily treating cotton. (See Section 1216[b]).

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1264.2. Bast and Leaf Fibrous Decorative Materials.** The fire-resistance test shall be performed at the completion of the 30-day aging period, and shall be conducted as nearly as practical as described in Section 1237.1. Tests shall be made on several different areas of the treated materials. There shall be no spread of flame from the area in contact with the test flame, and any afterflaming shall not exceed 10 seconds.

Authority: Health and Safety Code Sections 13120, 13121

Reference: Health and Safety Code Sections 13100 through 13132

**1264.3. Christmas Trees.** The chemical shall be applied to fresh green branches of Douglas fir, approximately 3 feet long. The fire-resistance test shall be performed at the completion of the 30-day aging period, and shall be conducted as nearly as practical as described in Section 1237.1. Tests shall be made on several different areas of the treated branch.

There shall be no spread of flame from the area in contact with the test flame, and any afterflaming shall not exceed 10 seconds. At the completion of the 30-day aging period, the treated branch shall not lose its needles more readily nor shall they have turned brown to a greater extent than those of the untreated branch similarly aged.

## **Article 4 Registration of Flame-Retardant**

**1270. Fee.** Any concern marketing a flame-retardant fabric or material desiring to have such fabric or material registered by the State Fire Marshal shall accompany its application with the registration fee as provided in Section 13127 of the health and Safety Code.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1271. Test Costs.** The cost of all laboratory test required shall be borne by the applicant.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1272. Fabric Registration.** Manufacturers who market a flame-retardant fabric or material for use as draperies, upholstery, wall coverings, etc., or a flame-retardant canvas for use in tents, may have their product listed under its trade name as a registered flame-retardant fabric or material provided that:

- (a) The fabric or material is treated by a registered flame-retardant application concern with a registered chemical; or
- (b) The fabric or material is inherently noncombustible (such as glass, asbestos or certain metallic cloths); or
- (c) The fabric or material is manufactured of such materials that the flame-retardant qualities may be expected to remain effective for the useful life of the fabric. This category includes such materials as fabric woven from nonflammable synthetic fibers; nonflammable plastic films or sheeting; treated, synthetic or inherently noncombustible fabrics which have been coated or impregnated with a nonflammable plastic, etc.

**NOTE:** Fabrics and materials falling in Group (a) above are automatically approved, but will be listed as such only upon payment of the registration fee required by statute.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1273. Basic Requirements.** Due to the wide variety of fabrics or materials which might fall into the preceding classifications, it is impractical to devise standards and test procedures which would be applicable uniformly to all materials. However, the basic requirement for any treated fabric or material shall be the ability to withstand the appropriate fire resistance tests outlined herein.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1273.1. Fabrics for Interior Use.** Fabrics described in Section 1272(c) intended for interior use shall be tested in their original condition only, and shall meet the requirements for fire resistance outlined in Section 1273.3.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1273.2. Fabrics for Exterior Use.** Fabrics as described in 1272(c) intended for exterior use shall meet the requirements for fire resistance outlined in 1273.3, and, in addition, they shall meet the requirements for fire resistance outlined in Section 1237, both in their original state and after accelerated weathering.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1273.3. Unsupported Film, Synthetic Fabrics and Coated Fabrics.** After removing the fabric from the test flame, the specimen shall not continue to flame for more than 2 seconds. Exception is made for short duration flaming, in accumulated char areas, which produces no flame spread or travel. No flames shall reach the top of the specimen.

Three specimens each 1 foot wide by 1 ½ feet long shall be tested for fire resistance.

Each specimen shall be suspended with its lower edge approximately 1 inch in the test flame, and not less than 24 inches in length exposed. The test flame from a 3/8-inch ID Bunsen burner, with the air supply just sufficient to remove all traces of yellow flame, but without any distinct blue inner cone, adjusted to a length between 3 ½ - 4 inches shall be applied vertically at the center of the lower edge. No exposure time limitation is imposed, since every effort must be made to initiate sustained combustion.

Failing to ignite the area originally exposed, the specimen should be moved to expose an area near either vertical edge.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1273.4. Flock.** The flock shall be applied heavily to a test armature made of 1 inch poultry wire 12 inches square folded every 3 inches to bring the creases 1 inch apart.

For nonadhesive flock, the adhesive shall be nonflammable both before and after drying. The test specimen shall be thoroughly dried before being tested.

The flock armature shall be suspended above the test flame and tested as provided by Section 1237 for the small scale fire resistance test.

There shall be no spread of flame from the test area in contact with the test flame, and any afterflaming shall not exceed 1 second.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1274. Additional Requirements.** In the case of fabrics described in Section 1272(c), the manufacturer (or jobber) shall submit to the State Fire Marshal a sample of his product not less than 2 yards in length or, if intended for exterior use, 5 yards long. Test reports from independent commercial testing laboratories may be required to substantiate claims made for such products. The State Fire Marshal may then perform, in addition to the fire resistance test, such tests as he may deem necessary to decide whether or not the product warrants registration.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1275. Secondary Registrations.** A concern desiring to register a flame-resistant fabric or material that is not a product of its own manufacturer, which required tests prove meets the requirements of this article for approval and registration, may apply for approval and listing under the concern's own trade or brand name as follows:

**(a) The manufacturer of the fabric or material shall certify his approval and give his consent in letter to the State Fire Marshal for the registration, sale, distribution, and use of his product under the proposed new name by the applicant concern and stipulate as follows in a letter to the State Fire Marshal:**

**(1) That all of the fabric or material supplied by him to the applicant concern for sale, distribution or use under the new name shall always be identical in all respects to the test sample and/or report last approved and registered by the State Fire Marshal, and**

**(2) That he will assign a production or lot control number to each specific unit of such production, and will submit to the State Fire Marshal a ¼-yard test specimen of each lot sold to the applicant concern, and**

**(3) That he will maintain a record of the amount of fabric or material furnished to the applicant concern and submit this information to the State Fire Marshal upon his request, and**

**(4) That he will notify both the applicant concern and the State Fire Marshal, in writing, of any proposed change in formulation or fire-resistant quality not less than 30 days prior to making such change and obtain his approval of such change. New test samples shall be submitted of the changed product.**

**(b) The application concern shall furnish any additional test reports from the independent approved testing laboratories that may be required to substantiate claims made for approval of the fabric or material and shall pay all costs in connection therewith.**

**(c) The applicant concern shall certify, in a notarized letter accompanying its application form, that the fabric or material sold, distributed or used under the new name shall always be identical in all respects to the test sample and/or report submitted by him and determined to be acceptable by the State Fire Marshal for approval and registration, and that it will be identified in all records by the same production or lot control number assigned by the manufacturer to a specific unit of production.**

**(d) The applicant concern shall pay to the Office of the State fire Marshal the original and annual registration fee as prescribed by the statutes.**



(e) Following registration, the concern shall furnish, in accordance with these regulations, test samples and an approved Certificate of Flame Resistance covering the registered fabric or material when the product is sold for use in occupancies governed by the statutes, or when such fabric or material is intended for use or may sometimes be used in the State of California.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

## **Article 5 Registration of Flame-Retardant Application Concerns**

**1280. Application.** Any person or firm desiring to engage in the business of or perform for a fee the act of applying a flame-retardant chemical to any fabric or material shall first make application for registration as a Flame-Retardant Application Concern on forms provided by the State Fire Marshal. Separate applications shall be submitted for each separate place of business.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13100 through 13132

**1281. Qualifications.** No application for registration as a Flame-Retardant Application Concern shall be considered unless such applicant or an employee thereof first demonstrates his or her qualifications by:

(a) Passage of a written examination as prepared by the State Fire Marshal on the laws, regulations and technical aspects of flame-retardant chemicals, fabrics, materials and fibers and how they may be identified. A score of 70% is considered as minimum for passage of the written examination. In addition, the State Fire Marshal may require a practical demonstration of the applicant's ability to properly perform the acts for which application has been made.

(b) Presentation of evidence of actual experience in the chemical application.

(c) Possession of necessary equipment and machinery to conduct application procedures.

(d) Submission of required fees as set forth in Section 13127, Health and Safety Code.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Sections 13100 through 13132

**1282. Employees.**

(a) The rights and privileges extended to a registered Flame Retardant Application Concern shall extend to bona fide employees of such concern provided all work performed by such employees is under the direct supervision of the individual who satisfactorily passed the examination required by Section 1281. All Certificates of Flame Retardancy issued by such concerns pursuant to this subchapter shall be signed by the individual who has satisfactorily passed the examination.

(b) Except as provided in Section 1282(a) above, the rights and privileges extended to a registered Flame-Retardant Application Concern shall not extend to any person, including but not limited to agents or representative operating with or without a contract with the registered concern. Such persons shall be considered as being separate concerns requiring separate registrations.

(c) No person who is not an employee of a Registered Flame-Retardant Application Concern shall be entitled to take the examination set forth in this section without first having made application for registration as a Flame-Retardant Application Concern.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Sections 13100 through 13132

**Article 6 Flame-Retardant Application Standards**

**1290. Chemicals.** No flame-retardant application concern shall apply a flame-retardant chemical on a job governed by the scope of these regulations unless the concern and the chemical are registered with and approved by the State Fire Marshal.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13120

**1291. Use.** No concern shall apply any flame-retardant chemical to any fabric or material for use governed by the scope of these regulations unless the chemical is registered with and approved by the State Fire Marshal for treatment of that particular type of fabric or material.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1292. Application.** The chemical shall be applied evenly and to all parts of the article being treated.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1292.1. Fire-Resistance.** The treated fabric or material shall meet the requirements for fire resistance described in Sections 1237, 1237.2, 1261, 1264.1, 1264.2 or 1264.3, whichever is applicable. Samples for testing may be smaller than the sizes in these regulations.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1293. Admixtures.** No concern shall add to or mix with any registered chemical any other chemical or substance except a thinning or penetrating agent approved by the chemical manufacturer.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

## **RECOMMENDED STANDARDS PRACTICES AND PRECAUTIONS**

**1300. Pretreatment Examination.** Before applying any flame-retardant chemical, the application concern shall first carefully examine the fabric or material to determine:

- (a) The type of fabric or material
- (b) If it has been previously treated
- (c) If it contains any sizing or loading
- (d) If it can be effectively and safely treated

Assuming that the fabric or material is of a type for which the chemical has been registered, the concern must then decide how much chemical must be applied. This will depend on the area to be treated and the type of fabric. The percent weight gain must be commensurate with that determined for the chemical on the standard qualifying fabric. It may be necessary to apply slightly more or less chemical than this, depending on the weight and type of the particular fabric being treated, but in every case sufficient chemical shall be applied to obtain satisfactory flame resistance.

If examination shows that the fabric has been previously treated, considerations must be given to the possibility that the old treatment combined with the new might nullify the flame-retardant effect, or might cause excessively rapid deterioration of the fabric. Whenever possible, all traces of any previous chemical treatment should be removed before re-treating.

The presence of sizing in a fabric can have a decided effect on the flame-retardant treatment, especially the exterior type. Some exterior chemicals will be registered only for the treatment of unsized canvas, and may not be applied to a sized material unless the sizing is first removed. Whenever practical, sizing should be removed before treatment with any chemical, since a treatment is always more effective and will last longer on an unsized fabric.

Celanese and acetate type rayons are extremely difficult to treat successfully, even though chemicals may be listed as approved for such fabrics. Applicators are cautioned not to undertake the treatment of such fabric unless they have adequate knowledge and experience.

Before treatment of printed or dyed interior fabric, the applicator must determine if the colors are fugitive and apt to run if the fabric is wet. In such case, the applicator must be especially careful in applying the chemical, so as not to cause the colors to run.

It is an acknowledged fact that certain metals and metallic pigments in contact with chlorinated paraffin will accelerate the liberation of hydrogen chloride, especially at high temperatures. This effect is most pronounced with iron, zinc, and pigments composed mainly of salts of these two elements. Zinc oxide is extremely harmful in this respect and its use should be avoided since its effect extends even to properly stabilized chlorinated paraffins.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13120

**1301. Fire Hazards.** Certain solvents, thinners, and penetrating agents (such as alcohol, toluol, ketones, petroleum solvents, etc.) sometimes used with flame-retardant chemicals are highly flammable, and manufacturers and applicators must take all necessary precautions to guard against the hazard of fire when using such liquids, especially indoors.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1302. Interlinings.** In the case of drapes, curtains, etc. which have interlinings, the applicator shall make every effort to treat the lower, accessible portion of the interlinings, but it shall not be deemed necessary to treat the entire interlining, or open the bottom of the article if it has been sewed.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1303. Water pH.** Manufacturers whose chemicals are diluted with water by the applicator must take into account the variation in pH of the water supplies of various localities. The pH of tap water in the Los Angeles area is sometimes as high as 8.7.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1304. Liability.** Protection of public property is a primary responsibility of the application concerning the field. Dripping, splattering, spilling, etc. should be anticipated and provisions made for use of drop cloths and shields. The flame-retardant application concern may be held liable for damages to persons or property arising out of and occurring during the course of flame-retardant chemical application and for negligence of his or its agents, servants, employees or subcontractors.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

## **Article 7 Field Testing for Fire Resistance**

**1310. Taking Specimens.** The specimens for making fire resistance tests may be taken by the inspection authority from any part of the fabric or material and in whatever size and number he deems necessary, and the management shall permit the State Fire Marshal or his duly authorized representative to take such specimens for testing purposes. It is assumed that the inspection authority will use reasonable judgement in taking test specimens to avoid unnecessary damage to the article.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1311. Testing Specimens.** When tests are deemed necessary by the inspection authority, samples should be taken and tested in accordance with the recommended procedure on file with the State Fire Marshal.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

## **Article 8 Flameproofing Certification, Labeling and Installation**

**1320. Pre-Job Notification.** Prior to the performance of every job of flame-retardant chemical application by a registered flame-retardant application concern on the premises of any occupancy mentioned in Sections 13115 or 13119 of the Health and Safety Code, such concern shall first notify the local fire department or the nearest Office of the State Fire Marshal, giving the time and date that the job is to be performed. This provision shall not apply to work done by an application concern on its own premises. The fire department or State Fire Marshal may take samples both of the chemical being applied and of the finished treated fabric(s).

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1321. Flame-Retardant Application Certification.** After every job of flame retardant chemical application by a registered flame-retardant application concern, an approved certificate of flame resistance shall be furnished the person or concern for whom the work was done, and copies sent the State Fire Marshal and the local fire authority. These certificates shall be delivered within 10 days after completion

of the job, shall be filled out completely and signed by an authorized representative of the registered application concern.

Notation shall be made on the reverse side of the certificate indicating the kind of material and color, and where curtains or drapes are treated, whether they are unlined, lined and interlined. Whenever possible the location and use of the treated articles should be given also.

This section shall apply only in cases where treated fabrics are intended for use or may sometimes be used in the State of California.

**Authority: Health and Safety Code Section 13120**

**Reference: Health and Safety Code Section 13120**

**1321.1. Fabric and Material Certification.** All concerns in whose name an approved flame-resistant fabric or material is registered shall issue approved certificates of flame resistance covering all such products sold for use in occupancies governed by the statutes. Copies shall be furnished the buyer as well as the State Fire Marshal and the local fire authority of the customer's city. These certificates shall be delivered within 10 days after the product is shipped and shall be filled out completely and signed by an authorized representative of the concern.

In addition to the required description on the reverse side of the certificate as to yardage or quantity, color and kind, notation should be made of the manufacturer's production or lot control number, the purchase order or invoice number, and, where possible, the ultimate location and use.

**Authority: Health and Safety Code Section 13120**

**Reference: Health and Safety Code Section 13120**

**1322. Certified True Copies.** Upon receipt of written request justifying such privilege, the State Fire Marshal may authorize issuance of certified true copies of certificates of flame resistance where conditions warrant. These certified true copies shall conform in every detail with the approved standard form on file with the State Fire Marshal. This form is identical to the approved standard certificate of flame resistance, with an additional legend appended, as follows:

**We hereby certify this to be a true copy of the original "Certificate of Flame Resistance" issued to us, "original copy" of which has been filed with the California State Fire Marshal.**

Spaces are provided below the legend for the names of the authorized issuing concern and its designated official.

In every instance when a certified true copy is issued, a copy shall be filed with the State Fire Marshal and the local fire authority in the customer's city. Test specimens of required size shall accompany the copy sent to the State Fire Marshal.

All of the data from the original certificate shall be copied exactly, special attention being given to the name of the registered chemical, fabric, or material and its registration number and the name of the issuing concern's official.

Notation shall be made on the reverse side of the certified true copy showing

- (a) The location of ultimate use, when known or obtainable, such as school, theater, night club, or other occupancy governed by the statutes,
- (b) The yardage or quantity,
- (c) The kind of fabric or material,
- (d) Its color,
- (e) The manufacturer's batch or production control number, and
- (f) The purchase order or invoice number as a means for identification

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1323. Filling Test Samples.** Flame-retardant application concerns shall attach to the certificate submitted to the State Fire Marshal not less than one 2" x 6" test sample of the fabric or material treated by them, excepting only where such sample cannot be taken without defacing finished converted goods such as curtains, drapes, flats, etc. No exception is permitted for yardage goods.

Test specimens of approved registered fabrics and materials shall be submitted to the State Fire Marshal. The wide variation in fire resistant quality of registered products, ranging from noncombustible to flameproof, militates against setting a single test size and frequency. In general, a 1' x 3' specimen of each unit or lot of fabric and film production bearing the production or lot number shall be submitted by the producer directly to the State Fire Marshal. For other special fabrics and materials, the sample size and test frequency will be specified on an individual



basis to the concern in whose name the product is registered.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1324. Job Labeling.** To every article that is treated and to every roll or package of registered approved fabric or material a small label or tag shall be securely affixed bearing the following information:

- (a) The Seal of Registration of the State Fire Marshal
- (b) Name and registration number of the concern responsible for the job or production,
- (c) Name of the registered chemical used or the registered fabric or material,
- (d) Date the chemical was applied, or the fabric or material was produced,
- (e) The statement: "This article must be re-treated after washing or dry cleaning by systems with soap and water added" (if treated with a Type II chemical)

This information may be stamped, printed or stenciled on the article if so desired.

Concerns which treat or manufacture yardage goods may print or stencil their name, or the name of their fabric if registered, on the salvage (at least once every 3 yards) instead of affixing the label or tag as above.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1325. Labeling Required.** No drape, hanging, curtain, drop or similar decorative material or exterior fabric which has been treated by a registered flame-retardant application concern, either as yardage or after fabrication, or which is made from a registered approved fabric shall be installed after the effective date of these rules and regulations in any place or under any condition governed by Section 13115 and 13119 of the Health and Safety Code unless such drape, hanging, curtain, drop, or similar decorative material or exterior fabric shall be labeled as required by Section 1324.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1326. Retreatment.** In cases where instructions are issued by the State Fire Marshal requiring retreatment or replacement of fabrics or materials previously treated with a flame-retardant chemical or registered as an approved fabric or material, the retreatment or replacement shall be made within 10 days after date of the order so requiring. A new certificate of flame resistance covering such retreatment shall be delivered as for an original job as is provided for by Section 1321. A new sample of the retreated fabric or material shall be attached to the certificate of flame resistance submitted to the State Fire Marshal.

**Authority: Health and Safety Code Section 13120**

**Reference: Health and Safety Code Section 13120**

**1327. Installation.** The standard fire resistance tests presume installation of approved registered fabrics in a normal vertical position. Some decorative materials installed otherwise, such as in narrow strips or suspended overhead in a horizontal position, may exhibit different burning characteristics. Since it is not feasible to devise tests for all such installations differing from normal, they must be judged on an individual basis. Where indicated, the State Fire Marshal may perform such additional tests as he deems necessary to insure adequate fire resistance of material installed.

**Authority: Health and Safety Code Section 13120**

**Reference: Health and Safety Code Section 13120**

## **Article 9 The Seal of Registration**

**1330. Description.** Seal of Registration of the State Fire Marshal of California  
The official Seal of Registration shall consist of a series of concentric circles lettered as follows:

Outer Circle:           Upper half: "REGISTERED"  
                                  Lower half: "FLAME RETARDANT"

Inner Circle:           Upper half: "STATE OF CALIFORNIA"  
                                  Lower half: "STATE FIRE MARSHAL"

In the center shall appear five crossed trumpets.

Appended below the outer circle and in the central position shall be a box provided for displaying the registration number assigned by the State Fire Marshal to any registered approved chemical, fabric, material or flame retardant application concern.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13120



**1331. Unlawful Use.** No person or concern shall use this Seal in any manner or for any purpose without having received official permission so to do from the State Fire Marshal in writing.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13120

**1332. Permissive Use.** Use of this Seal shall be restricted to permissive use by persons and concerns as defined by these rules and regulations as proof of the fact that the State Fire Marshal of California has approved and registered one or more of the following:

- (a) Flame-retardant chemical.
- (b) Flame-retardant fabric.
- (c) Flame-retardant material.
- (d) Flame-retardant application concern.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1333. Approved Use.** Approved uses of the Seal shall include, but not by way of limitation, use in connection with:

- (a) Labels for containers of approved and registered chemical; or for fabrics or materials.
- (b) Stencils for tents, canvas and similar fabrics.
- (c) Printed matter including the certificate of flame resistance, approved promotional matter and copy for publication.
- (d) Letterheads, personal cards and similar stationary.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1334. Reproduction.** No person shall make any reproduction of the State Fire Marshal's Seal of Registration other than one made from the proof of the master copy furnished the registered person or concern at the time the registration number is issued, and such reproduction shall be made in accordance with the instructions for use thereon. No alteration of the original, or copy, or facsimile other than the original furnished by the State Fire Marshal shall be used.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1335. Registration Number.** Before reproduction of the Seal of Registration, there shall be inserted in the box provided the Registration Number assigned by the State Fire Marshal to designate the chemical, fabric, material or application concern.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1336. Size.** Reproductions of the Seal for use in labeling containers of flame-retardant chemical shall have a maximum diameter of 1 ½ inches.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1337. Cease Use Order.** No person or concern shall continue use of this Seal in any manner or for any purpose after receipt of a notice in writing from the State Fire Marshal to discontinue such use, or after receipt of notice in writing of the removal of its name or the name of its product from the registered list.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1338. Misuse.** Violation of such an order or misuse of the Seal shall constitute a violation of these rules and regulations and is a misdemeanor within the meaning of the governing statute.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

## **Article 10 Approval of Testing Laboratories**

**1340. Listing.** Testing laboratories wishing to have their names listed on the State Fire Marshal's list of approved laboratories, shall first make application to the State Fire Marshal on the form provided by him.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1341. Approval Basis.** No laboratory shall be approved for the testing of flame-retardant chemicals unless it possesses or has access to the use of (1) all the equipment for performing the tests required, and (2) personnel familiar with the testing of the flame-retardant qualities of fabrics and materials.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13120

## **Article 11 Violations and Penalties**

**NOTE:** The statutes require the removal from the approved list of the names of all chemicals, flame-retardant fabrics or materials and the names of all flame-retardant application concerns who fail to pay their annual renewal registration fee on or before July 31st of each year.

**1350. Statutory.** Section 13123 of the State Health and Safety Code provides that "The State Fire Marshal shall remove from his approved list the names of any flame-retardant application concern where he finds after a hearing that any of the following causes exists:

- (a) "Selling or offering for sale a flame-retardant chemical or a flame-retardant material that is inferior to that submitted for test and approval."
- (b) "Distributing or disseminating or causing to be distributed or disseminated, misleading or false information with respect to any flame-retardant chemical, fabric, or material."
- (c) "Changing the flame-retardant chemical formula or methods of flame-retardant treatment without first notifying the State Fire Marshal of such change and obtaining approval of same."
- (d) "Using other than chemicals shown on the State Fire Marshal's approved list."
- (e) "Using chemicals for the treatment of materials for which they have not been approved."
- (f) "Failure to adequately and properly treat a fabric or material to make it fire resistant to the extent that it will successfully pass the fire resistance tests established by the State Fire Marshal."

(g) "Violating any minimum standard or any rule or regulation adopted pursuant to Section 13120."

"The proceedings shall be conducted in accordance with Chapter 5 of Part 1 of Division of Title 2 of the Government Code, and the State Fire Marshal shall have all the powers granted therein. Pending hearing and decision the State Fire Marshal may temporarily remove any name from his approved list for a period not to exceed 30 days, if he finds that such action is required in the public interest. In any such case the order of temporary removal shall be effective upon notice to the persons affected thereby, and a hearing shall be held and a decision issued within 30 days after such notice."

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13123

**1351. Advertising.** Reference to approval and listing by the State Fire Marshal of a product shall be limited to a statement to the effect that the product has met the requirements of and is registered by the California State Fire Marshal.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13123

**1352. Regulatory.** Repeated evidence of any of the following conditions shall be cause for removal from the list:

- (a) Failure of a chemical to impart satisfactory flame resistance in actual use.
- (b) Abnormal deterioration of fabrics or materials to which a chemical has been applied.
- (c) Failure of an application concern to apply sufficient chemical (consistent with amounts used in qualifying tests) to impart flame resistance for a reasonable period of time, depending on the conditions of use of the fabric or material treated.
- (d) Failure to deliver Certificate(s) of Flame Resistance as required by Section 1321 of these rules and regulations.

Authority: Health and Safety Code Section 13120  
Reference: Health and Safety Code Section 13123

**1353. Employer Responsibility.** Every flame-retardant application concern shall be responsible for the acts of its employees or agents, insofar as such acts apply to the flame-retardant treatment of any fabric or material, and the concern's registration certificate shall be subject to revocation for acts of said employees or agents.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120

**1354. Restoration to List.** Restoration of names to the registered lists shall be in accordance with Section 13124 and 13125 of the Health and Safety Code.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Sections 13124 and 13125

**1355. Criminal Penalties.** Furthermore, Section 13112 of the State Health and Safety Code states as follows: "Every person who violates any provision of this chapter, or any order, rule, or regulation made pursuant to this chapter, is guilty of a misdemeanor punishable by a fine of not less than \$50.00 nor more than \$200.00, or by imprisonment for not less than 30 nor more than 180 days or by both.

"A person is guilty of a separate offense each day during which he commits, continues, or permits a violation of any provision of, or any order, rule, or regulation made pursuant to this chapter.

Authority: Health and Safety Code Section 13120

Reference: Health and Safety Code Section 13120



# Appendix A

# **APPENDIX "A"**

## **CPAI-84**

### **SPECIFICATION FOR FLAME RESISTANT MATERIALS USED IN CAMPING TENTAGE FOR TENTS**

**(THIS STANDARD IS APPLICABLE ONLY TO SMALL TENTS, PER TITLE 19, CRC)**

**"This excerpt from CPAI-84 is reprinted with premission of the  
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## **7. Test Method, Wall and Top Material**

### **7.2 Apparatus**

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#### **7.2.4 Required Gas**

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#### **7.3.1 Specimen**

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#### **7.3.3 Afterflame Time**

#### **7.3.5 Measuring of Specimen**

#### **7.3.6 Tearing Force**

### **7.4 Report**

#### **7.4.1 Averaging Specimens**

#### **7.4.2 Reporting Afterflames and Damaged Lengths**

## **2. DEFINITIONS**

**2.2 Material Classifications:** All materials covered in this standard fall under one of the following definitions:

**2.2.1 Flooring Material:** Any pliable material used for flooring in camping tentage but excluding such things as rugs or carpets placed in the tent which are not an integral part of the item.

**2.2.2 Wall and Top Material:** Any pliable material used in camping tentage for other than flooring including walls, roofs, tops, doors, windows, screens, awnings, files and canopies.

**2.3 Sample Unit:** A sample unit shall consist of the following:

**2.3.1 Flooring Material:** Four individual specimens, no two specimens containing the same warp or fill yarns or filaments.

**2.3.2 Wall and Top Materials:** Eight individual specimens, four taken from the warp and four from the fill directions of the test material. No two warp specimens shall contain the same warp yarns or filaments and no two fill specimens shall contain the same fill yarns or filaments.

## **3. PERFORMANCE REQUIREMENTS**

**3.1 Flooring Material:** When subjected to the test described in Section 6, no specimen from a sample unit of flooring material shall be damaged within 1.0 inch of the edge of the hole in the flattening frame.

**3.2 Wall and Top Material:** When subjected to the test described in Section 7, no specimen from a sample unit of wall and top material shall have an afterflame time (length of time a specimen continues to flame after removal of the test flame source) of more than 4.0 seconds; the average afterflame time for all specimens in a sample unit shall not exceed 2.0 seconds. The damaged length (distance from the bottom of the specimen to a point above which all material is sound) for the sample unit and individual specimens shall not exceed the values shown in Section 3.2.1. Portions or residues which break or drip from the test specimens shall not continue to flame after they reach the floor of the test cabinet.



3.2.1 **Damaged Length:** The maximum permissible damaged lengths for wall and top material shall be as follows:

| Untreated Weight of Material Being Tested<br>Ounces Per Square Yard | Maximum Average Damaged Length for Samples Unit - Inches | Maximum Damaged Length for an Individual Specimen - Inches |
|---|--|--|
| Over 10   | 4.5  | 10.0   |
| Over 8 but not over 10  | 5.5  | 10.0   |
| Over 6 but not over 8   | 6.5  | 10.0   |
| Over 4 but not over 6   | 7.5  | 10.0   |
| Over 1.5 but not over 4   | 8.5  | 10.0   |
| Not over 1.5  | 9.0  | 10.0   |

## 5. **CONDITIONING**

5.1 **Standard Conditions for Testing:** Flame tests shall be performed under or upon immediate removal from Standard Atmospheric Conditions and on specimens in moisture equilibrium under Standard Atmospheric Conditions.

5.1.1 **Standard Atmospheric Conditions:** Standard Atmospheric Conditions for testing are 65 percent t/- 2 percent relative humidity at a temperature of 70°F t/- 2°F. (21.1°C t/- 1.1°C)

5.1.2 **Moisture Equilibrium:** Moisture equilibrium is considered to have been reached when, after free exposure of the material to air in motion controlled at Standard Atmospheric Conditions as defined above, the change in weight of successive weighings made at intervals of 1-hour is no greater than 0.25 percent.

5.1.3 **Preconditions:** In the event of dispute concerning the results of tests that may be affected by the moisture content, the material shall be preconditioned by being brought to moisture equilibrium with an atmosphere having a relative humidity of not over 10 percent and a temperature not over 125°F (52°C). The material shall then be brought to moisture equilibrium under Standard Atmospheric Conditions as defined above and then tested.

5.2 **Leaching:** Tests in Sections 6 and 7 shall be performed both before and after leaching.

### **5.2.2 Apparatus:**

5.2.2.1 Water container or tank of such and size that the specimen can be submerged therein with all surfaces of the specimen having full access to the water. For cloth specimens the container shall allow not less than 1/2 gallon of water for each square foot of specimen. The water shall be changed by a continuous flow or by emptying and refilling so that there shall be at least six complete changes of water in a 72-hour period.

5.2.3 Procedure: The specimens shall be immersed in water at a temperature of 60°F to 70°F and a pH of 6.0 to 8.0 for 72 hours. The specimen shall then be removed, air-dried and brought to Standard Atmospheric Conditions prior to further testing.

5.3 **Accelerated Weathering:** Tests in Section 6 and 7 shall be performed both before and after accelerated weathering.

### **5.3.2 Apparatus:**

5.3.2.1 Vertical carbon arc mounted at the center of a vertical cylinder. The arc shall be designed to accommodate either two or three pairs of carbons but shall burn only one pair at a time, automatically transferring from one pair to another as the carbons are consumed. The carbons shall be Sunshine-cored and copper-coated, No. 22 for the upper pair and No. 13 for the lower pair. The arc shall be operated on 60 amperes and 50 volts across the arc for alternating current and on 50 amperes and 60 volts across the arc for direct current.

### **5.3.3 Procedure:**

5.3.3.7 The specimen shall be exposed to normal radiation from the arc for 100 hours.

5.3.3.8 At the end of the exposure period, the specimen shall be removed from the machine, allowed to dry, brought to Standard Atmospheric Conditions prior to further testing.

## **6. TEST METHOD, FLOORING MATERIAL:**

### **6.2 Apparatus:**

6.2.1 Test Chamber: The test chamber shall consist of an open top hollow cube made of noncombustible material with inside dimensions 12 X 12 X 12 inches and a minimum of 1/4 inch wall thickness. The flat bottom of the box shall be made easily removable. The sides shall be fastened together with screws or brackets and taped to prevent air leakage into the box during use.



6.2.5 Standard Igniting Source: No. 1588 methenamine timed burning tablet or equal tablet. These tablets shall be stored in a desiccator over a desiccant for 24 hours prior to use. (Small quantities of sorbed water may cause the tablets to fracture when first ignited. If a major fracture occurs, any results from the test shall be ignored, and it shall be repeated.)

### 6.3 Procedures:

6.3.1 Place the test chamber in the draft protected environment (hood with draft off) with its bottom in place and the supporting frame centered in the bottom of the chamber, shimmed side down.

6.3.4 Ignite the tablet by touching a lighted matched or an equivalent igniting source carefully to its top.

6.3.5 Continue each test until the last vestige of flame or glow disappears (this is frequently accompanied by a final puff of smoke) or the flaming or smoldering has approached within 1.0 inch of the edge of the hole in the flattening frame at any point. (Any test in which the tablet is extinguished by physical action of the specimen or flooring material shall be disregarded and the test repeated.)

6.3.6 When all combustion has ceased, ventilate the hood and measure the shortest distance between the edge of the hole in the flattening frame and the damaged area. Record the distance measured for each specimen.

6.4 Report: The number of specimens of the four tested in which the damaged area does not extend to within 1.0 inch of the edge of the hole in the flattening frame shall be reported.

## 7. TEST METHOD, WALL AND TOP MATERIAL

### 7.2 Apparatus:

7.2.1 Cabinet: A cabinet and accessories, fabricated in accordance with the requirements specified by IFAI. Galvanized sheet metal or other suitable metal shall be used. The entire inside back wall of the cabinet shall be painted black to facilitate the viewing of the test specimen and pilot flame.

7.2.2.5 The burner shall be fixed in a position so that the center of the barrel of the burner is directly below the center of the specimen.

7.2.4 The gas used shall be Matheson Manufactured Gas Type B or the equivalent.



### **7.3 Procedure:**

7.3.1 The specimen in its holder shall be suspended vertically in the cabinet in such a manner that the entire length of the specimen is exposed and the lower end is 3/4 inch above the top of the gas burner. The apparatus shall be set up in a draft free area.

7.3.2 Prior to inserting the specimen, the pilot flame shall be adjusted to approximately 1/8 inch in the height measured from its lowest point to the tip. The burner flame shall be adjusted by means of the needle valve in the base of the burner to give a flame height of 1-1/2 inches with the stopcock fully open and the air supply to the burner shut off and taped. The 1-1/2 inch flame height is obtained by adjusting the valve so that the uppermost portion (tip) of the flame is level with the tip of the metal prong specified for adjustment of flame height. It is an important aspect of the evaluation that the flame height be adjusted with the tip of the flame level with the tip of the metal prong. After inserting the specimen, the stopcock shall be fully opened, and the burner flame applied vertically at the middle of the lower edge of the specimen for 12 seconds and the burner turned off. The cabinet door shall remain shut during testing.

7.3.3 The afterflame time for each specimen shall be reported to the nearest 0.2 seconds. After flaming and glowing have ceased, the specimen shall be removed from the cabinet.

7.3.5 After both flaming and glowing have ceased, the damaged length shall be measured. The damaged length shall be the distance from the end of the specimen, which was exposed to the flame, to the end of a tear (made lengthwise) of the specimen through the center of the damaged area as follows: The specimen shall be folded lengthwise and creased by hand along a line through the highest peak of the damaged area. The hood shall be inserted in the specimen (or hole, 1/4 inch in diameter or less, punched out for the hook) at one side of the damaged area 1/4 inch from the adjacent outside edge and 1/4 inch in from the lower end. A weight of sufficient size such that the weight and hook together shall equal the total tearing load required in 7.3.6.1 shall be attached to the specimen.

7.3.6 A tearing force shall be applied gently to the specimen by grasping the corner of the cloth at the opposite edge of the char from the load and raising the specimen and weight clear of the supporting surface. The end of the tear shall be marked off on the edge and the damaged length measurement made along the undamaged edge.

7.3.6.1 Loads for Determining Damaged Length: The specific load applicable to the weight of the test material shall be as follows:

| untreated Weight of Material Being Tested - Ounces Per Square Yard | Total Tear Weight for Determining the Damaged Length - Pounds |
|--|---|
| Not exceeding 3.0  | 0.125   |
| Over 3.0 and not exceeding 6.0                                     | 0.25  |
| Over 6.0 and not exceeding 10.0                                    | 0.50  |
| Over 10.0  | 0.75  |

7.3.7 The damaged length for each specimen shall be recorded to the nearest 0.1 inch.

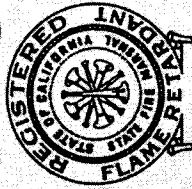
#### 7.4 Report:

7.4.1 The afterflame time and damaged length of the sample unit shall be the average of the results obtained from the individual specimens tested. All values obtained from the individual specimens shall be recorded.

7.4.2 The afterflame time shall be reported to the nearest 0.2 second and the damaged length to the nearest 0.1 inch.

# Appendix B

# Certificate of Flame Resistance



REGISTERED FABRIC  
OR  
CONCERN NUMBER

ISSUED BY

Date treated or  
manufactured

This is to certify that the materials described on the reverse side hereof have been flame-retardant treated (or are inherently nonflammable).

FOR \_\_\_\_\_ ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

Certification is hereby made that: (Check "a" or "b")

- ☐ (a) The articles described on the reverse side of this Certificate have been treated with a flame-retardant chemical approved and registered by the State Fire Marshal and that the application of said chemical was done in conformance with the laws of the State of California and the Rules and Regulations of the State Fire Marshal.

Name of chemical used \_\_\_\_\_ Chem. Reg. No. \_\_\_\_\_

Method of application \_\_\_\_\_

- ☐ (b) The articles described on the reverse side hereof are made from a flame-resistant fabric or material registered and approved by the State Fire Marshal for such use.

Trade name of flame-resistant fabric or material used \_\_\_\_\_ Reg. No. \_\_\_\_\_

The Flame Retardant Process Used \_\_\_\_\_ Be Removed By Washing

(will or will not)

By \_\_\_\_\_ Name \_\_\_\_\_ Title \_\_\_\_\_  
Name of Applicator or Production Superintendent

FR-3

THIS REPRODUCIBLE ARTWORK IS FOR THE EXCLUSIVE USE OF STATE FIRE MARSHAL LICENSED CONCERNS  
AND INDIVIDUALS FOR THE PRODUCTION OF REQUIRED FORMS.

CONTROL NO. \_\_\_\_\_

CUSTOMER ORDER NO. \_\_\_\_\_

CUSTOMER INVOICE NO. \_\_\_\_\_

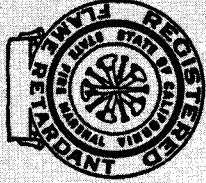
YARDS OR QUANTITY \_\_\_\_\_

COLOR \_\_\_\_\_

SIZE/TYPE \_\_\_\_\_

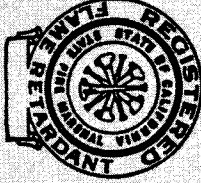
DATE PROCESSED \_\_\_\_\_



|  |  |   |
|--|--|---|
|  |  | <b>INHERENTLY<br/>FLAME<br/>RETARDANT</b> |
| SEE REVERSE  |  | SIZE _____                                |
| <b>INHERENTLY FLAME RETARDANT</b><br>Supplied by _____                             |  |   |
| Registration No. _____   |  | Date _____                                |

BACK

FRONT

|   |  |   |
|---|--|---|
|  |  | THIS ARTICLE MUST<br>BE RETREATED<br>AFTER WASHING OR<br>DRY CLEANING BY<br>SYSTEMS WITH SOAP<br>AND WATER ADDED.<br>SIZE _____ |
| SEE REVERSE   |  |   |
| <b>FLAME RETARDANT</b><br>Treated by _____  |  |   |
| Name of Chemical Used _____   |  | Date of Application _____   |
| Registration No. _____  |  |   |

ANY OTHER USE IS PROHIBITED  
 WITHOUT THE EXPRESS WRITTEN  
 PERMISSION OF THE STATE FIRE  
 MARSHAL.



**DO NOT REMOVE**  
**BY ORDER OF THE STATE FIRE MARSHAL**

**FOLIAGE HAS BEEN  
FLAME RETARDANT TREATED**



I CERTIFY this foliage has been treated  
with a chemical registered with the  
California State Fire Marshal and the  
treatment was made in accordance with  
manufacturers instructions by

☐ dipping ☐ spraying

\_\_\_\_\_  
*Signature*

\_\_\_\_\_  
*Applicator No.*

\_\_\_\_\_  
*Chemical Used*

\_\_\_\_\_  
*Reg. No.*

\_\_\_\_\_  
*Date of Treatment*

(NAME AND ADDRESS OF CONCERN)

**ANY OTHER USE IS PROHIBITED  
WITHOUT THE EXPRESS WRITTEN  
PERMISSION OF THE STATE FIRE  
MARSHAL.**



Before reproducing the seal, insert YOUR registration number in the panel below the seal.

Permissible uses for this seal:

1. Labels for containers of approved and registered chemicals;
2. Labels for approved and registered fabrics
3. Stencils for tents, canvas and similar fabrics
4. Printed matter including Certificat of Flame Resistance, promotional material and copy for publication.